Frequently Asked Questions

Why is MoDOT building sound walls?
Federal regulations require MoDOT to study sound levels when adding through lanes to major highways. Sound walls are a way to minimize the increased noise that comes with more driving lanes. MoDOT would lose federal funding if it did not look at the environmental impacts of its projects.

Why do some areas get sound walls and others don't?
A sound study is done whenever MoDOT adds through lanes, a new road or changes the location of a road. MoDOT can only build walls in locations where all criteria are met. It would be fiscally irresponsible for MoDOT to build walls that don't meet sound wall criteria.

Why can't MoDOT just plant trees or build a berm?
Landscaping and berms for sound reduction are not feasible in many areas. A group of trees would have to be more than 100 feet thick and very dense to provide adequate noise reduction. Earthen berms can diminish sound, but they require a wide swath of land. Vertical walls are most often the only cost-effective option for reducing noise.

Missouri Department of Transportation/Southwest District

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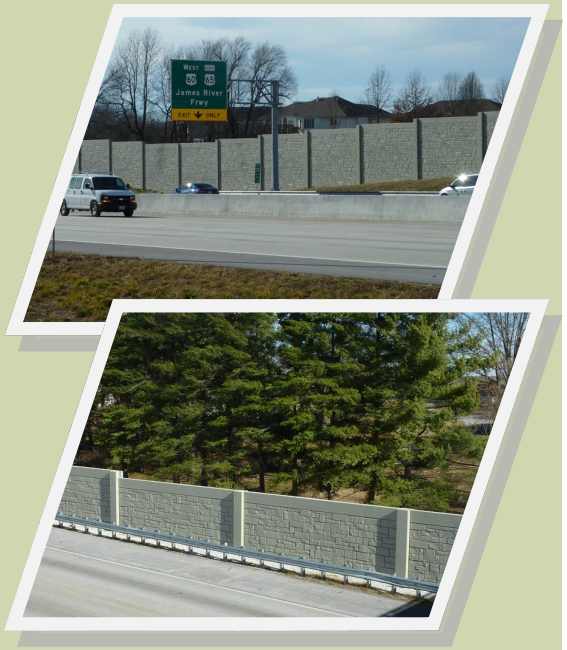
1/2013

Sound *Walls*



Why, When & Where With Road Construction

Why Build Sound Walls?

The Federal Highway Administration (FHWA) requires MoDOT to complete a noise sound study any time it plans to add through lanes to an existing highway, build a new road or change the location of a road.

Sound walls are not analyzed unless noise levels are at least 66 decibels (dBA) for property owners next to a highway. At this noise level, it is difficult to hear normal speech. An effective sound wall can reduce noise levels up to 10 dBA. The decibel scale is exponential; meaning a 10 dBA decrease will cut loudness in half. Sound walls will not completely eliminate traffic noise but they can lessen the constant hum of traffic for those closest to the highway.

MoDOT's noise policy is based on federal guidelines and regulations for determining where and when sound walls can be placed. **All** MoDOT sound reduction criteria (listed below) must be met for a sound wall to be built. If all of the criteria are met, the walls can be funded as part of the highway construction project.

Noise Policy Criteria

- Predicted noise levels exceed 66 dBA
- Sound wall must provide minimum 7 dBA reduction in outdoor living space for two-thirds of first-row properties
- Maximum height of 20' for safety
- Can be built on state property and must meet safety criteria and maintenance needs
- Majority of benefited owners and residents must vote in favor of the wall
- All-inclusive bid cost shall not exceed $36,000 per benefited property

Sound Wall Location

Whether a sound wall should be located at the MoDOT property line or closer to the road depends on where it would be most effective in reducing the noise. MoDOT's first choice is to locate a sound wall about five feet inside the public right-of-way, which allows room for installation, maintenance and drainage. However when residences are lower than the roadway, a sound wall needs to be closer to the road noise source to be effective. The location and height of a wall is determined in the same study that determines when a wall is warranted. A wall must be built on state property.

Property Owner/Resident Approval

Those people who live immediately adjacent to the highway and who are benefited will be asked to vote whether they want a wall. These benefited property owners will be given information about the general location, height and look of a wall. If a majority want a wall, a wall will be built, provided all of the other sound wall criteria are met. If a majority of benefited owners/residents do not want the wall, then it will not be built.

Final Construction Cost

Receiving actual construction bids is the last step in the approval process for sound walls. The final cost for each benefited property will not be known until the contract is bid. Once the cost is known, the decision on sound wall construction is made.

Common Noise Levels